



USER'S MANUAL



Model: ID-3750
Standard type

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NOTICE !

- Please read and follow the instruction in this manual carefully and keep it in a suitable place for further references
- Warrantee: 12 months from commissioning date (in the condition that the unit are operated and maintained according to those instructions in this manual).
- Safety information: ID-series high temperature type dehumidifiers are designed and built with carefulness to ensure that most of the safety requirements by international institution. However, the users must be responsible for general safety rules to protect himself and the units.

I. GENERAL INFORMATION

Ikeno dehumidifiers provide an effective and efficient solution to humidity control. Ikeno high temperature type dehumidifiers, ID-3750, are designed for airflow of 3000CMH and easily installation. Moreover, the units are designed for duct installation so that there are more option for system installation.

Model ID-series designed by our company, is the most reliable unit in the range. It dehumidifies air by dropping air temperature below its dew point to condensate out moisture vapor. The condensation water is discharged out by drainage hose and air temperature is raised going through condenser coil. Ikeno dehumidifier can keep the air dry, reduce the cost of heating, restrain the growing speed of germ, fungi, maintain the suitable humidity and reduce the cost caused by dampness.

The ID-standard type dehumidifiers are widely used in places where the relative humidity must be controlled and room temperature is a bit higher than ambient, such as low drying kiln, non-insulation storage in hot climate area, other special hot and humid working/storage places.

II. PRODUCT DESCRIPTION

1. MAIN FEATURES

- The enclosed compressor is made in Europe, U.S.A and Japan. The SAGINOMIYA humidity controller and SAGINOMIYA pressure protection switch.
- A wide applicability. It can be used in a low temperature, high humidity and a high temperature, high humidity environment.
- Automatically control humidity. It can save operation cost by automatically controlling the operation based on the humidity setting.

- The unit can be installed conveniently. The conventional type and the wall hanging type can be installed on anyplace in the room and can be used after being powered. The unit installed outside must be covered under shield to avoid sunlight and rain.
- The wall hanging type is suitable for the narrow place needing be dehumidified for its small cubic.
- The high temperature type can be used to dehumidify the room where the primary materials of drying, food, chemical, marine product, farming product, printed matter, crude drug, etc..

2. COMPONENT IDENTIFICATION



3. WORKING PRINCIPLE



Main working components are: high efficient compressor, accumulator, magnetic flow control valve, evaporator coil, condenser coil, capillary tube, centrifugal fan, temperature sensor, humidity sensor and electrical wiring.

The centrifugal fan makes wet air entering into the evaporator through air filter, then the air is cooled down. When the surface temperature of the evaporator is lower than the dew-point temperature of the air, the water content in the air is condensed and drained from the machine.

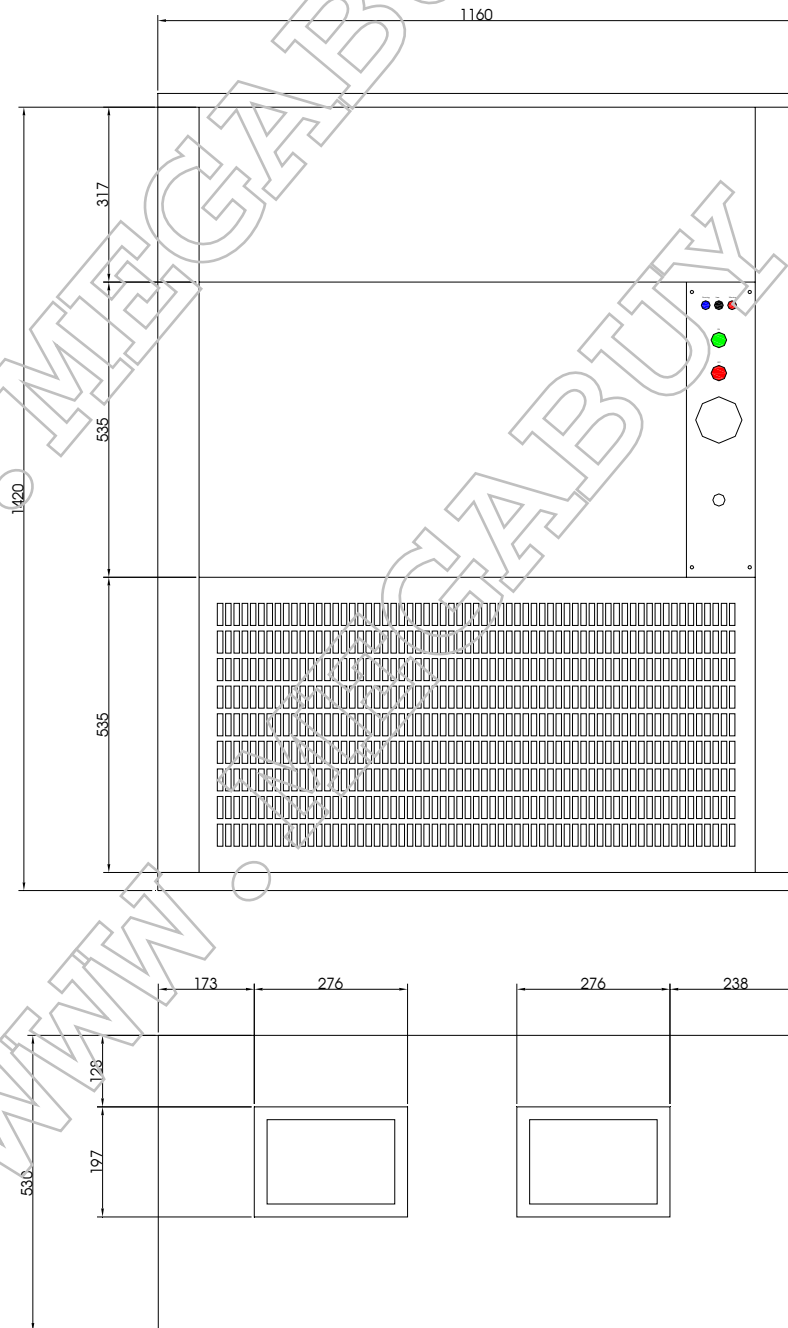
The dehumidified air is then heated by the condenser and is discharged into the room by the centrifugal fan. Thus, the air goes through the cycle and the water in the air gets condensed so as to achieve dehumidification.

When the environment temperature is lower (5°C - 18°C) during running, the surface of the evaporator will be frosted due to lower temperature. The computer will judge and

send the defrosting command automatically as the situation. After defrosting, the dehumidifier will turn back to run normally.

In order to protect the unit from severe damage during operation the unit is equipped with such a safety features such as: low pressure cut-off, compressor overload protection, defrost cycle, main short-circuit fuse.

4. DIMENSION



5. SPECIFICATION

STANDARD MODEL

Type	ID-3750
Capacity L/h	13
Flow m ³ /h	3000
Power Kw	5.5

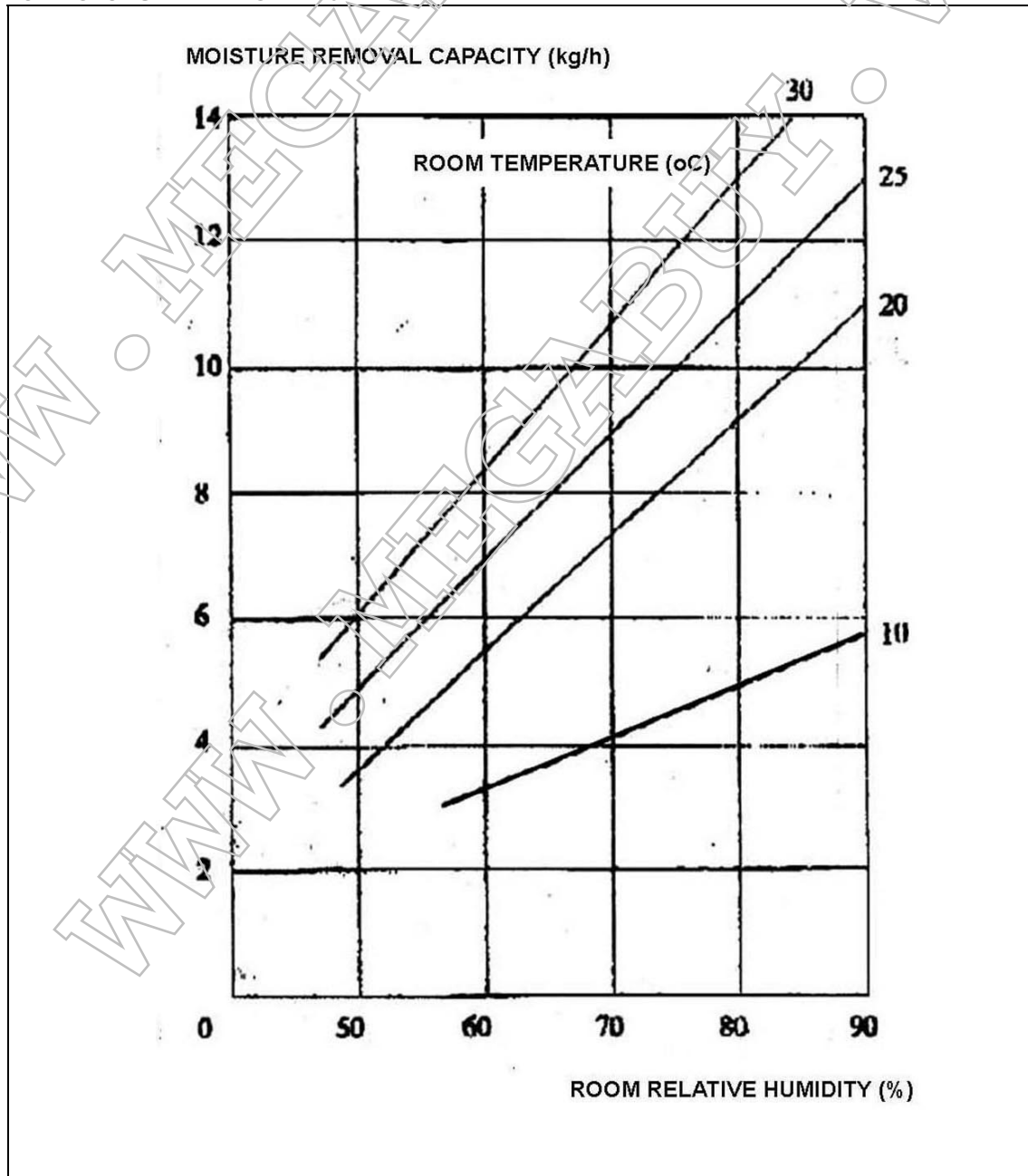
Note :

Nominal working condition : 27.0°C (DB), 21.2°C (WB)

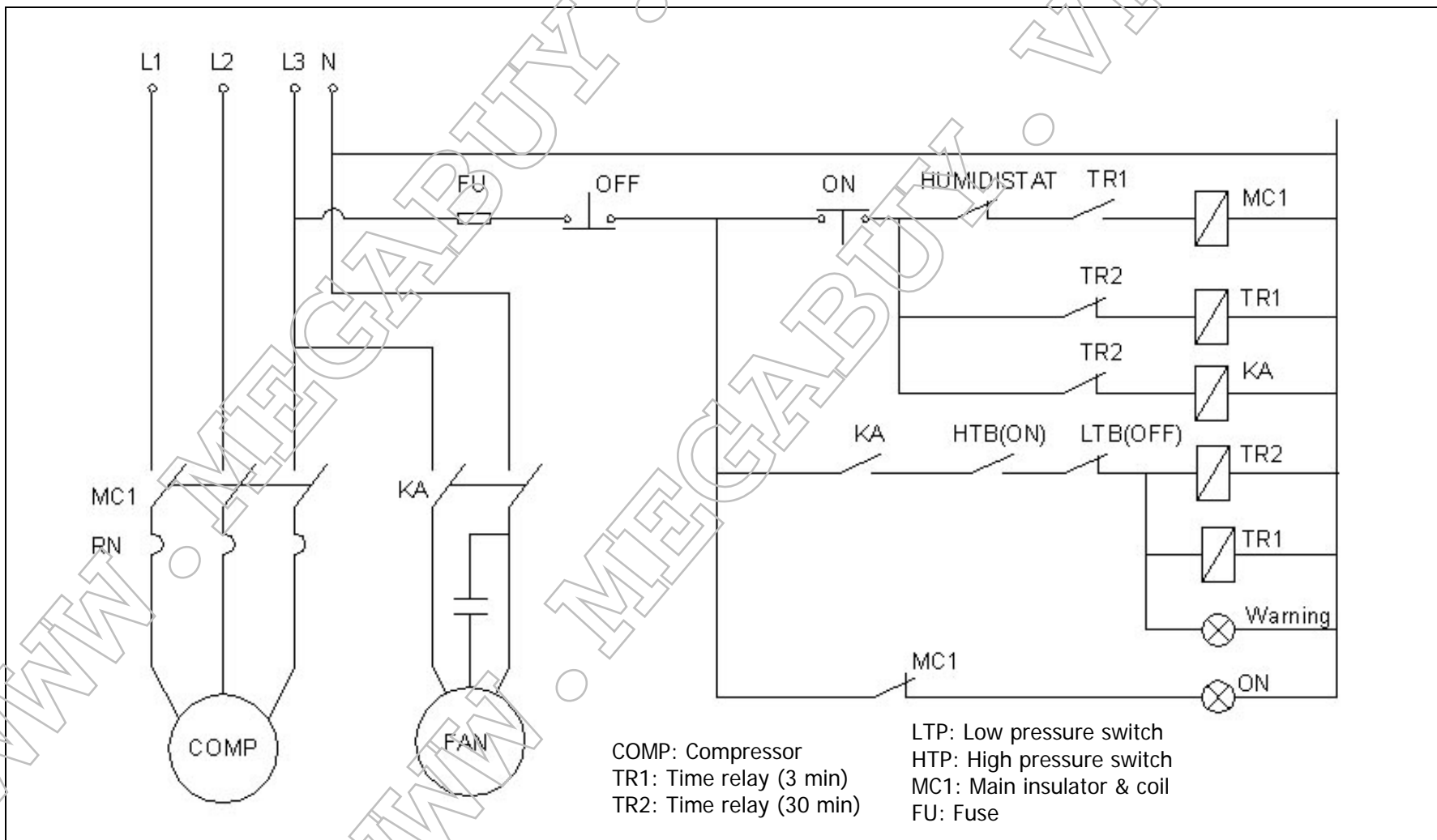
Low temperature working condition : 5.0°C (DB), 2.1°C (WB)

High temperature working condition: 50°C

6. MOISTURE REMOVAL CAPACITY



7. ELECTRICAL DIAGRAM



III. INSTALLATION

1. Receiving inspection

Remove the shipment packing and inspect unit to ensure that no damage has occurred during transportation and storage. Any visible damage must be reported to nearest Ikeno representative.

2. Working Environment

- + The unit should be installed stably. There should be one meter of space in front of the inflow and outflow. There should be no large obstacle around it.
- + The machine set should be far from heat source and inflammable gas.
- + The condensed water could be drained out of the room or into a pail.
- + It is advisable to not to install it in a place of heavy dust or serious pollution.

3. Power source

- + The power should be supplied with a special wire.
- + Provide automatic circuit breaker.
- + There should be reliable electrical grounding.

4. Other requirement

- + Skilled professional personnel should perform maintenance of the unit.
- + Parking inclination of the unit should not exceed 10°.

IV. OPERATION PROCEDURES



1. Turn on

- + Switch on the main insulator (provided by contractor).
- + The power lamp (2) is on.
- + Turn humidistat knob (5) to desired value
- + Push ON button (3) to start the unit (Notice: in case the unit has just been stopped for less than 3 minute, the delay relay keeps the turn on for 3 minutes to protect compressor).
- + The Operation lamp (1) is on and unit starts working.

2. Turn off

- + Push OFF button (4) to turn the unit off.
- + Switch off main insulator

Notice !: Vapor pressure gauge (6) used to check compressor performance (technical personal only).

V. MAINTENANCE

- * Switch off the power source before maintenance.
- * Due to the accumulation of dusts, the air filter should be cleaned to avoid effecting dehumidifying and going wrong periodically, at least once a month.

1. Clean the air filter

When cleaning, gently tap the air filter or remove the dust with a vacuum cleaner, or you can put the air filter in warm water ($\leq 40^{\circ}\text{C}$, add a little neutral detergent) to wash it or to brush it, and then wash with clear water.

Attention

- a. The air filter should not be exposed directly to sun or fire, to avoid deforming.
- b. The air filter should be fixed before starting the dehumidifier.

VI. TROUBLES AND COUNTERMEASURES

Problem	Cause	Solution
Unit does not operate	Power failure Power source is not switched on or not well plugged Fuse is broken	Check and solve problem
Unit does not operate although there is no power problem	Room humidity has lower than set humidity in humidistat	Turn humidistat to higher value to see whether the unit re-operate, the reset initial position
Capacity reduction	Air filter dusted	Clean air filter
Drained water leaks out	Drain pipe is blocked	Remove the front panel and wipe off dirt from the pipe

VII. POINTS TO REMEMBER

1. Its outlet dry air temperature is higher than inlet air temperature, but outlet air's moisture content is lower. When the dried air is sent to one space, it soon will mix with the space's wet air and absorb the humidity. So, normally, space's humidity will decrease after half an hour of operation. However, temperature of the space will be little bit higher if the space uses dehumidifier for drying for a long time.
2. Before being used, the whole set of dehumidifier should be earthed.
3. After opening the packing, pls. check whether there is any damage of the machine due to transport, whether the connecting line of each electric parts is tip-off, loosen or cut off. If there is, please try to repair it.
4. Dehumidifier should be avoided from sunlight and other heat sources, such as burner. Please let its surrounding air be circulating, especially inlet air entrance.
5. Drain pipe should lead to cloaca lengthened by rubber pipes, so that coagulate water can be moved out. If no cloaca, then the coagulate water have to be drained outside
6. Turn the knob of humidity controller to required value of relative humidity, then the compressor can start or stop based on this value, circulating fan will operate continuously.

7. The machine should be stopped if the operating situation is against the following points. Otherwise, the machine will be easily damaged:
 - + The fluctuating scope of voltage cannot be over $\pm 10\%$ of the rating voltage.
 - + The interval of each operation cannot be less than 5 minutes, otherwise, it would cause damage to compressor. Moreover, operation times cannot be more than 6 times per hour.
8. The dehumidifier has time-delay protection
9. Even in a satisfied working environment, humidity's setting value should be a little bit higher.
10. Make sure that the setting of the whole machine should be stable and there is no other big obstruction around the machine
11. The machine should be far from heat sources, inflammable and explosive gases.
12. Try to be far away from dusty environment, or the place where it is polluted seriously by acid-alkali chemical.
13. For three phases machine set, you should be sure that the running direction of fan is correct. (The running direction of fan wheel points to machine's front face).
14. Adjust humidity controller, set one required humidity value.
15. Press ON button to start Fan
16. The compressor will start after 3 minutes' time delay
17. When the machine just start or surrounding temperature is low, the red lamp will turn on. This situation is normal.
18. When humidity reduces to the setting value, dehumidifier's compressor will stop (when temperature increases, it will restart).
19. Drain pipe can connect with other pipe to drain the water out.
20. Before using, you should pay attention to check whether electricity power is suitable for machine's power requirement.
21. The electricity parts should be far away from rain or water with the purpose to avoid electric leakage. If the above situation happens, you should have some dry treatment.
22. You should clean the surface periodically. But decontamination reagent or other organic solvent to clean it.
23. The Air Filter for inlet air should be cleaned once a week. If surrounding environment is much dusty, the cleaning time should be shorter.
24. When the machine is moved to another place, the machine should be with vertical position. If it need to lean, the angle with the horizon should be less than 45 degree.

25. When turn on the machine, if it cannot work, then you should check the connecting wires are in a normal situation or not. For circuit drawing, please see the attached picture.
26. If the refrigerating system works normally, please do not open it. For is is the closed type, it is no need to add cryogen.
27. When the machine is under operation, if there is metal colliding sound, you should stop the machine and check whether the screws of Fan is loosened or disengaged.
28. After 20 minutes' operation, the drain pipe will have some water to be drained out. (Refrigerating water should be full of the basin so that it will be drained out). If the temperature/humidity is lower, the time needed will be longer. This is normal.

If the troubles have not been removed yet, please contact the dealer.

IMPORTANT USER INFORMATION

Intended use of the unit

The ID-series dehumidifier is intended to be used for the dehumidification of air. All other uses of the equipment, or use which is contrary to the instructions given in this manual, can cause personal injury and/or machine damage.

Warranty and obligations

The warranty period is 12 months from commissioning date unless otherwise advised in writing. The warranty is limited to a free exchange complete with free freight, of faulty units or components which have failed as a result of faulty quality or defects in manufacture.

Ikeno guarantees that the delivered unit has undergone rigid testing to ensure that the specifications stated here are fulfilled. All claims on warranty must verify that the fault has occurred within the guarantee period., plus that the unit has been used within its operating range as stated in the specification. All claims must include the unit type and manufacturing number.

Conformity with directives and standards

The Ikeno dehumidifier is designed and manufactured by an EN-ISO 9001 accredited development and manufacturing organization. The unit conforms with the specifications in the Machinery Directive 98/37/EEC, the Low Voltage Directive 73/23/EEC as amended by Directive 93/68/EEC and the EMC Directive 89/336/EEC as amended by Directives 92/31/EEC and 93/68/EEC. The standards applied are listed in the EC Declaration of Conformity.

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